



CY 2023 Real World Testing Plan for Abeo Solutions

Executive Summary

This is the real world test plan for CY 2023 for Abeo Solutions Crystal Practice Management certified EHR solution. It provides the real world test measurements and metrics that meet the intent and objectives of ONC’s Condition of Certification and Maintenance of Certification requirement for real world testing (§ 170.405 Real world testing) to evaluate compliance with the certification criteria and interoperability of exchanging electronic health information (EHI) within the care and practice setting which it is targeted for use.

As ONC has stated in its rule, “The objective of real world testing is to verify the extent to which certified health IT deployed in operational production settings is demonstrating continued compliance to certification criteria and functioning with the intended use cases as part of the overall maintenance of a health IT’s certification.” We have worked toward this objective in designing our test plan and its subsequent real world testing measurements and metrics.

This document builds toward the final testing measurements and metrics we will use to evaluate our product interoperability within production settings. Within each measure, we document planned testing methodology, associated ONC criteria, justification for measurement, expected outcomes from the testing, care settings applied for this measure, and if applicable the number of clients to use the our real world testing approach, including how our test cases were created, our selected methodology, the number of client/practice sites to use, and our general approach and justification for decisions.

We have included our timeline and milestones for completing the real world testing in CY 2023, and information about compliance with the Standards Version Advancement Process updates.

A table of contents with hyperlinks is provided later in the plan quick access to any document section, including the testing measurements and metrics found at the end of this document. Our signed attestation of compliance with the real world testing requirements is on the following page.



Developer Attestation

This Real World Testing plan is complete with all required elements, including measures that address all certification criteria and care settings. All information in this plan is up to date and fully addresses the health IT developer's Real World Testing requirements.

Authorized Representative Name: Paul Crowley

Authorized Representative Email: paul@crystalpm.com

Authorized Representative Phone: (512)844-6635

Authorized Representative Signature:

Paul Crowley

10/24/2022



Executive Summary..... 1

Developer Attestation..... 2

General Information 4

Timeline and Milestones for Real World Testing CY 2023..... 5

Standards Version Advancement Process (SVAP) Updates 6

Real World Testing Measurements 7

 Testing Methodologies 7

 Number of Clients Sites 7

 Care and Practice Settings Targeted..... 7

 RWT Measure #1. Number of Transition of Care C-CDAs Successfully Sent 9

 RWT Measure #2. Number of C-CDAs Received and/or Incorporated..... 11

 RWT Measure #3. Number of Patients Given Access to Portal 13

 RWT Measure #4. Number of Direct Messages Successfully Sent 15

 RWT Measure #5. Number of Patient Batch Exports Run 17

 RWT Measure #6. Number of Quality Measures Successfully Reported on to CMS..... 18

 RWT Measure #7. Number of IIS/Immunization Registries Connected with our EHR 19

 RWT Measure #8. Number of 3rd Party Applications Registered and Authorized to use API to Access Patient Data 20

 RWT Measure #9. How many different HIEs/HINs are connected with our EHR? 21



General Information

Plan Report ID Number: Abeo-RWT-2022

Developer Name: Abeo Solutions

Product Name(s): Crystal Practice Management

Version Numbers(s): 6.0

Certified Health IT Criteria: 315(b)(1), (2), (6); (c)(1)-(c)(3); (e)(1); (f)(1); (g)(7)-(9)

Product List (CHPL) ID(s) and Link(s):

- <https://chpl.healthit.gov/#/listing/10996>
- 15.04.04.1030.Crys.06.01.1.221004

Developer Real World Testing Page URL: <http://crystalpm.com/certification/>

Timeline and Milestones for Real World Testing CY 2023

- 1Q-2023: Begin communication with clients to ask for their support and participation in real world testing. The goal is to have a sufficient number of clients committed for real world testing by the end of 1Q-2023.
- 2Q-3Q 2023. During the 2nd and 3rd quarter of CY 2023, the real world testing with clients will be scheduled and performed. It is expected that a preparatory call will be done with clients to prepare them for testing activities. Results will be documented in the test results section of the test methods and ultimately used to build the test report. If any non-compliances are observed, we will notify the ONC-ACB of the findings and make the necessary changes required.
- 4Q-2023. During the last quarter of the year, the CY 2024 real world test plan will be completed according to ONC and ONC-ACB requirements and expectations. Test plan will be prepared for submission before the end of the year.



Standards Version Advancement Process (SVAP) Updates

For CY 2023, we are not planning to make any version updates on approved standards through the SVAP process. We have implemented USCDI v1 in our C-CDAs and API support.

Standard (and version)	USCDIv1
Updated certification criteria and associated product	170.315 (b)(1), 170.315 (b)(2), 170.315 (e)(1), 170.315 (g)(6), 170.315 (g)(9) for Crystal Practice Management 6.0
Health IT Module CHPL ID	15.04.04.1030.Crys.06.01.1.221004
Method used for standard update	Certification Attestation
Date of ONC-ACB notification	N/A
Date of customer notification (SVAP only)	N/A (only for SVAP)
Conformance measure	170.315 (b)(1) using ONC Test Procedure 1.1 and Edge Test Tool 2.3.48, 170.315 (b)(2) using ONC Test Procedure 1.2 and Edge Test Tool 2.3.48, 170.315 (e)(1) using ONC Test Procedure 1.4 and Edge Test Tool 2.3.48, 170.315 (g)(6) using ONC Test Procedure 1.1, 170.315 (g)(9) using ONC Test Procedure 1.2 and Edge Test Tool 2.3.48
USCDI-updated certification criteria (and USCDI version)	170.315 (b)(1), 170.315 (b)(2), 170.315 (e)(1), 170.315 (g)(6), 170.315 (g)(9) for USCDIv1

Real World Testing Measurements

The measurements for our real world testing plan are described below. Each measurement contains:

- Associated ONC criteria
- Testing Methodology used
- Description of the measurement/metric
- Justification for the measurement/metric
- Expected outcomes in testing for the measurement/metric
- Number of client sites to use in testing (if applicable)
- Care settings which are targeted with the measurement/metric

In each measurement evaluate, we elaborate specifically on our justification for choosing this measure and the expected outcomes. All measurements were chosen to best evaluate compliance with the certification criteria and interoperability of exchanging electronic health information (EHI) within the certified EHR.

Testing Methodologies

For each measurement, a testing methodology is used. For our test plan, we use the following methodologies.

Reporting/Logging: This methodology uses the logging or reporting capabilities of the EHR to examine functionality performed in the system. A typical example of this is the measure reporting done for the automate measure calculation required in 315(g)(2), but it can also be aspects of the audit log or customized reports from the EHR. This methodology often provides historical measurement reports which can be accessed at different times of the year and evaluate interoperability of EHR functionality, and it can serve as a benchmark for evaluating real world testing over multiple time intervals.

Number of Clients Sites

Within each measure, we note the minimum number of clients or client sites we plan to use for this measure evaluation. The numbers vary depending on the methodology as well as overall use of the associated EHR Module criteria by our users. For criteria that are not widely used by our customer base, we may test the respective measure in our own production-sandbox environment given lack of customer experience with the criteria functionality.

Care and Practice Settings Targeted

Our EHR is primarily targeted to optometry, and our measures were design for this setting in mind. In each measure, we do also address the care settings targeted and note any necessary adjustment or specific factor to consider with this specific measure.





RWT Measure #1. Number of Transition of Care C-CDAs Successfully Sent

Associated Criteria: 315(b)(1), 315(h)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many C-CDAs are created and successfully sent from the EHR Module to a 3rd party via Direct messaging during a transition of care event over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months previous to the current date to analyze the messages exchanged during this time.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can create a C-CDA patient summary record, including ability to record all clinical data elements, and by sending the C-CDA patient summary record, the EHR demonstrates successful interoperability of an exchanged patient record with a 3rd party. This measurement shows support for Direct Edge protocol in connecting to a HISP for successful transmission.

This measure will also demonstrate the successful integration with our primary HISP Rosetta Health HISPDirect.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

Whenever a transition of care C-CDA is sent through the Direct Mail integration, our logs will determine many documents and many unique patients were involved which allows us to analyze the results to obtain our interoperability metrics.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create the C-CDA patient summary record, including record required clinical data elements. In sending the C-CDA patient summary record, the EHR will demonstrate ability to confirm successful interoperability of an exchanged patient record with a 3rd party, including support for Direct Edge protocol in connecting to a HISP (Rosetta Health). Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not



completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #2. Number of C-CDAs Received and/or Incorporated
Associated Criteria: 315(b)(1), (b)(2), (h)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many C-CDAs are successfully received and/or incorporated upon receipt from a 3rd party via Direct messaging during a transition of care event over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months previous to the current date to analyze the messages exchanged during this time.

Measurement Justification

Receiving and incorporating patient records as C-CDAs is critical to patient care and is an important feature of EHRs which is why this measure was selected. This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can receive a C-CDA patient summary record, and by incorporating the C-CDA patient summary record, the EHR demonstrates successful interoperability of problems, medications, and medication allergies of patient record with a 3rd party.

This measurement shows support for Direct Edge protocol in connecting to our HISP, Rosetta Health HISPDirect, for successful exchange.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

A log entry is added whenever a practice receives a Direct Mail message with a C-CDA attached, when the Direct Mail message is associated with a patient, and when the C-CDA attached to the Direct Mail message is incorporated with a patient's data. We then upload the aggregated and generalized (non-PHI) data from the logs to our analytics in our cloud database on a set interval (every 6 months).

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create the EHR can receive a C-CDA patient summary record. In incorporating the C-CDA patient summary record, the EHR will demonstrate successful interoperability of problems, medications, and medication allergies of patient record with a 3rd party, including support for Direct Edge protocol in connecting to a HISP. Successfully completing this measure also implies users have a general understanding of the EHR functional



operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #3. Number of Patients Given Access to Portal

Associated Criteria: 315(e)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many patients are given login access to their patient portal account over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months previous to the current date to analyze the messages exchanged during this time.

Measurement Justification

Patients' ability to access their health records through an online portal is critical part of modern health IT, and this measure will provide a numeric value to indicate how often patients are given access to their patient portal. An increment to this measure indicates that the EHR can supply patient health data to the patient portal and provide an account for the patient to use in accessing this data.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

When a patient or patient's authorized user is given access to the patient portal, a log entry will be created for analysis. We then upload the aggregated and generalized (non-PHI) data from the logs to our analytics in our cloud database on a set interval (every 6 months).

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can submit patient health data to the patient portal on a regular and consistent basis as well provide an account for the patient to use in accessing this data. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.



Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #4. Number of Direct Messages Successfully Sent

Associated Criteria: 315(h)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many Direct messages were successfully sent from the EHR Module to a 3rd party over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months previous to the current date to analyze the messages exchanged during this time.

Measurement Justification

This measure will provide a numeric value to indicate number of Direct messages sent from the EHR. Because our certification to 315(h)(1) relies upon Rosetta Health HISPDirect as additional software, we want to create a metric to evaluate it is successfully working and integrated within product. An increment to this measure indicates that the EHR can create a Direct message and demonstrates successful interoperability of an exchanged message with a 3rd party.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports and audit logs, including Automated Measure (315.g.2) reports, to determine our measure count.

Whenever a Direct Mail message is successfully sent, a specific type of log is added. We then upload the aggregated and generalized (non-PHI) data from the logs to our analytics in our cloud database on a set interval (every 6 months).

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can be authenticated with DirectTrust, create a Direct message, and demonstrate interoperability of an exchanged message with a 3rd party. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.



Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #5. Number of Patient Batch Exports Run

Associated Criteria: 315(b)(6)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many batch exports of C-CDAs were successfully performed by the Crystal Practice Management EHR over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months before the current date to analyze the messages exchanged during this time.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that the EHR can create a batch export of multiple C-CDA patient summary records.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports, audit logs, user submitted reports, and other means to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can create a batch export of multiple C-CDA patient summary records, which can be used in means of health IT interoperability. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #6. Number of Quality Measures Successfully Reported on to CMS

Associated Criteria: 315(c)(1)-(c)(3)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many eCQM quality measures were successfully reported on by the Crystal Practice Management EHR to CMS over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months before the current date to analyze the measures submitted during this time.

Measurement Justification

This measure will provide a count and list of electronic clinical quality measures (eCQMs) which are calculated and submitted to CMS for a given program, like MIPS. Clinical quality measures are only used for the respective CMS programs and any production measures should utilize submission to CMS. Because CQM criteria, 315(c)(1)-(c)(3), all work collectively together in the eCQM functionality of the EHR Module, this measurement is used for all three.

Measurement Expected Outcome

The measurement will a count and list of eCQMs submitted to CMS over a given interval. We will utilize various reports, audit logs, user submitted reports, and other means to determine our measure count.

A successful measure submission indicates compliance to the underlying ONC criteria. It will show that the EHR can do calculations on the eCQM and that they are accepted by CMS. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure result to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #7. Number of IIS/Immunization Registries Connected with our EHR

Associated Criteria: 315(f)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many immunization registries are connected to our EHR over the course of a given interval.

Upon the time of testing, we will use an interval of twelve (12) months before the current date to analyze the messages exchanged during this time.

Measurement Justification

This measure will provide a numeric value to indicate both the how often this interoperability feature is being used as well as its compliance to the requirement. An increment to this measure indicates that an immunization registry can be connected with our EHR and exchange messages.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports, audit logs, user submitted reports, and other means to determine our measure count.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that the EHR can interface with an immunization registry. Through this interface, the EHR will be able to create the HL7 immunization record, including ability to record the required clinical data elements. In sending the immunization message, the EHR will demonstrate ability to confirm successful interoperability of patient's immunization data to an IIS/immunization registry. Successfully completing this measure also implies users have a general understanding of the EHR functional operations for this EHR Module and an overall support for the user experience while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #8. Number of 3rd Party Applications Registered and Authorized to use API to Access Patient Data

Associated Criteria: 315(g)(7)-(g)(9)

Testing Methodology: Reporting/Logging

Measurement Description

This measure is tracking and counting how many 3rd party applications are successfully registered and authorized to use the Crystal Practice Management EHR API service.

Measurement Justification

This measure will provide a numeric value to indicate both the how many client systems are using the API service of the EHR. An increment to this measure indicates that a 3rd party is registered and authorized and can query the clinical resources of the patient health record via the API interface and thus demonstrate API interoperability.

Measurement Expected Outcome

The measurement will produce numeric results over a given interval. We will utilize various reports, audit logs, user submitted reports, and other means to determine our measure count. Upon the time of testing, we will determine how many applications have been registered and have used the API within the twelve (12) month time period before the current date.

A successful measure increment indicates compliance to the underlying ONC criteria. It will show that a 3rd party client can be authenticated, that the patient record can be properly identified and selected, and that the EHR can make patient data accessible via its API interface. Successfully completing this measure also implies the public API documentation is accurate and sufficient for 3rd parties to connect and use the API while not completing this measure may indicate lack of understanding or possibly lack of use or need for this functionality.

We will use the measure count to establish a historic baseline of expected interoperability use so it can be used in subsequent real world testing efforts.

Care Settings and Number of Clients Site to Test

We designed this measure to test the optometry setting that we support and target. We will test a minimum of five (5) client practice(s). This number covers a sufficient percentage of existing practices to provide a viable sample of users of the certified EHRs.



RWT Measure #9. How many different HIEs/HINs are connected with our EHR?

Associated Criteria: 315(h)(1)

Testing Methodology: Reporting/Logging

Measurement Description

This is a measure to determine how many different HIEs or HINs are connected to our EHR installations.

Measurement Justification

This measure will determine how many different HIEs or HINs have connected with our EHR for exchanging of data. We'll run our internal tool to find out how many offices use each supported HIE integration.

This information can reveal the impact and value HIE interoperability. With TEFCA effort coming in the near future, use of HIEs will likely be more important in the coming years.

Measurement Expected Outcome

We'll run an internal tool to determine out how many offices have done HIE integration with the following HIEs: (American Optometric Association (AOA), Kentucky Health Information Exchange (KHIE), One Health Port (OHP, Washington State HIE).

The answer will provide insight into how clinicians view both the use and value of this interoperability feature. For example, this may show that additional training is needed to better utilize the feature or that it is not currently utilized as currently designed. It will provide a benchmark for evaluate future surveys as well as to share insight into any new development for improvements or enhancements of the health IT system.

Care Settings and Number of Clients Site to Test

We will do this search through all of our optometry sites to determine which ones are connected to HIEs or HINs.